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Running head: FACEBOOK AND BRANDS

**Does a virtual like cause actual liking?:
How following a brand's Facebook updates enhances
brand evaluations and purchase intention.**

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Abstract

Studies have shown positive associations between liking a Facebook brand page and brand evaluations, but causal evidence is lacking. This online pre- post-measure experiment compared brand evaluations of ‘current followers’ of a target brand’s Facebook page, with ‘new followers’ instructed to ‘like’ the page, and ‘non followers’ over one month. Results showed a significant positive increase for new followers on brand evaluations, whereas non-followers showed no change. Current followers were most positive in evaluations overall, but showed no change over time. This provides evidence that following a brand’s Facebook updates can *cause* positive changes in brand evaluations. The effects were explained by perceived Conversational Human Voice, indicating the importance of brand interactivity. Implications for brands’ social media presence are discussed.

Keywords:

Social media; Facebook; brand attitude; brand equity; purchase intention; NPS

Conversational human voice

Does a virtual like cause actual liking?: How following a brand's Facebook updates enhances brand evaluations and purchase intentions.

The advent of social media has opened up new opportunities for brands to connect with consumers. A majority of companies now include social media in their communication strategy. Yet, it remains uncertain whether these social media investments pay off by positively affecting consumer's brand evaluations and purchase intentions (Weinberg & Pehlivan, 2011).

Research into the use of social media by brands does at least suggest a beneficial effect. Several studies reveal positive correlations between social media use and variables like brand loyalty, brand evaluations, purchase intention, or Net Promoter Score (NPS, e.g., Dholakia & Durham, 2010; Kim & Ko, 2012; Naylor et al., 2012). However, most findings are based on correlational data and/or rely on consumers who have chosen to follow the brand themselves. Consequently these studies do not allow for any causal conclusions since the positive brand evaluations reported by participants may very well be the cause rather than the effect of following the brand. The present online study was designed to fill this gap by using both an experimental manipulation assigning participants to follow a target brand on Facebook for a one month period, and a pre- and post-measure of brand evaluations.

Social Network Sites and Brand evaluations

Brands have established an active presence on many social network sites. In 2013, 77% of the Fortune 500 companies were active on Twitter, 70% on Facebook, and 69% on YouTube (Barnes, Lascault & Wright, 2013). On these social networks sites, brands engage in activities like customer service, offering product information, special offers and various kinds of entertainment. Through these activities, brands aim to promote their products and the brand itself and to build relationships with prospects and customers.

On Facebook, brands can currently be found in generic brand communities (i.e., Facebook groups) and on brand pages (boyd & Ellison, 2007; Zaglia, 2013). For Facebook brand pages, previously called fan pages, a simple like is enough to get (part of) the brand's content on one's Facebook wall, whereas in Facebook groups membership is often restricted. Facebook brand pages are more commonly used than Facebook groups and arguably the most frequently used way of brands to communicate directly with consumers. The reach of brand pages is much higher than Facebook groups, with some brands maintaining brand pages with over 40 million (Red Bull) or even 80 million (Coca Cola) followers. A 2012 industry study, showed that one third of American consumers with a profile on either Twitter or Facebook followed at least one brand, mostly on Facebook (Edison Research, 2012).

While the reach of Facebook brand pages is high, the ties that may result from liking a Facebook brand page may be less strong than ties that are based on participation in a Facebook group. Facebook brand pages are described as a "social network-based online brand community" (Pöyry, Parvinen, & Malmivaara, 2013; p. 226) and "a weaker form of brand community" (Zaglia, 2013; p. 222), in which consumers mainly participate due to utilitarian motives (e.g., getting information or benefits; Zaglia, 2013). Even though a significant proportion of Facebook users like one or more brand pages, little is known about the effects of these Facebook likes. The question remains whether Facebook pages can be used as a means to promote a brand and enhance brand evaluations.

Liking a brand on Facebook can be considered as a first step toward, or a light form of customer engagement. Customer engagement behavior has been defined by Van Doorn et al. (2010) as "a customer's behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers". Liking a Facebook fan page may constitute such a brand-focused behavioral manifestation, be it one that requires little effort and investment, and that may serve various personal and social goals. Liking a brand on

Facebook exposes consumers to content created by the brand and thus constitutes an important way of distributing brand information. Consumers who like a brand page expose themselves to a stream of content that brands post on their pages. Moreover, brand pages allow for increased (informal) interactivity. In most cases, consumers are allowed to post on the brand page itself, and followers are exposed to the responses posted by the brand and other consumers.

The question our study aims to answer is whether liking a Facebook page affects brand evaluations, even when it is a rather passive form of participating in a brand community. Liking a brand page exposes consumers to brand messages and product information that they otherwise would not have encountered. Several industry studies have shown that liking a brand on Facebook is related to more positive brand attitudes and a higher incidence of purchases of the brands' products or services. For example, a study that compared Facebook fans' vs. non-fan customers' purchase behavior found that fans spend more than non-fan customers (Mulvihill, 2011). Also, fans of a retailer Facebook brand page spend almost 50% more than non-fans (Renfrow, 2014).

Several academic studies have also shown that engaging with a brand in social media is related to positive evaluations of the brand. Consumers that either followed or were familiar with the Facebook fan page and/or the Twitter activities of an international airline reported more positive reputation scores than consumers who did not follow the brand (Dijkmans, Kerkhof, & Beukeboom, 2015). Moreover, positive evaluations of a company's social media postings were shown to relate to both positive brand attitudes and higher purchase intention (Schivinski & Dabrowski, 2013). Passive usage (browsing the brand page) of a company-hosted Facebook brand page was related to a higher purchase intention in a study by Pöyry, Parvinen, and Malmivaara (2013). Labrecque (2014, Study 1) showed that the perceived interactivity of a brand was related to loyalty and willingness to share

information with the brand. Several other studies revealed positive correlations between social media use and variables like brand loyalty, brand evaluations, purchase intention, and Net Promoter Score (e.g., Bruhn, Schoenmueller, & Schäfer, 2012; Dholakia & Durham, 2010; Kim & Ko, 2012; Naylor et al., 2012; Schivinski & Dakabrowski, 2013; Turri, Smith & Kemp, 2013).

The studies cited above, however, are correlational and cannot exclude the possibility that a positive brand evaluation precedes social media engagement, rather than follows from engaging with the brand's social media activities. Existing positive brand evaluations may very well result in brand engagement of some kind. For example, positive word-of-mouth on Twitter (retweeting brand messages) is related to higher brand identification and brand trust (Kim, Sung & Kang, 2014). Likewise, positive brand evaluations may induce individuals to follow a brand's Facebook page. Knowing whether the reversed causal effect exists, – i.e., following a brand on Facebook causes enhanced brand evaluations – is however more crucial for companies, as it ascertains that investing in social media is worthwhile. Such a causal effect seems plausible given that a like increases exposure to, usually positive, brand related information, which may positively affect brand evaluations.

The question whether liking a brand page affects brand evaluations is also relevant given that many brands organize “like-us on Facebook” actions. Such actions may range from simple banners to promotions that require a like from consumers before they can get benefits like price reductions, lottery tickets, or wifi access. Indeed, sales, discounts and special offerings are frequently mentioned reasons to follow a brand in social media (e.g., Edison Research, 2012). And although consuming brand related information in social media appears to be mainly predicted by needs for information and entertainment, at least some consumers like a page because of the direct benefits a brand offers (Muntinga, Moorman & Smit, 2011; see also Hennig-Thurau et al., 2004; Wang & Fesenmaier, 2003). Such invited, or more or

less enforced, likes are interesting in the sense that they do not necessarily follow from consumers personal liking or interest in the brand. Do such invited likes, that make the consumer follow the brand's Facebook updates, cause enhanced brand evaluations? Such an effect would show a causal effect separated from the reverse effects of brand liking causing brand following.

The present study aims to answer this question by comparing the brand evaluations of a target brand over time in a pre-post measure design with a one month interval. In the design we compared a control group (non Facebook followers), and a group of consumers who already follow the brand's Facebook page and chose to do so themselves (current followers), with a randomly selected group of consumers who were instructed to 'like' the brand's Facebook page and thus follow its posts (new followers). At both the pre- and post-measure all participants rated the brand on the dependent measures brand attitude, brand equity, Net Promoter Score and purchase intention. For brevity reasons we will refer to these combined variables as 'brand evaluations'. We formulated the following hypotheses.

First, assuming that consumers with an above average positive evaluation of a brand are more likely to start following a brand, we hypothesize that:

H1: Current Facebook followers of the target brand have more positive brand evaluations compared to both new- and non followers

Second, over a one month period we expect consumers who follow the target brand's Facebook posts (i.e., new and current followers) to show an increase in brand evaluations compared to non followers. This effect may be less pronounced for current followers, who already followed the brand prior to the study. Current (compared to new-) followers have a longer prior history with the brand and are therefore less exposed to new information in this period. Moreover, current (compared to new-) followers may already be positive about the brand to begin with (see also H1). Still, as a result of exposure to brand content posted on

Facebook, we predict an increase in brand evaluations for both current and new followers.

We hypothesize:

H2: Between the pre- and postmeasure, both current and new Facebook followers increase in brand evaluations, whereas non followers do not show a change.

If we indeed observe that following a brand's Facebook updates causes consumers' enhanced brand evaluations, there may be several potential explanatory processes that we aim to test. First, given that we hypothesize that exposure to the brand's Facebook updates causes the changes, the amount of exposure to Facebook posts could be an important explanatory variable. However, logically the consumer's attitude towards these received posts may be an important factor. That is, being exposed to Facebook posts should particularly improve brand evaluations when these posts are liked. We therefore hypothesize:

H3: Both the amount of exposure and attitude towards the target brand's Facebook posts and page positively predict improvements in brand evaluations.

Apart from exposure to positive brand messages, a second explanation for the idea that following a brand on social media can positively affect brand evaluations is that it makes consumers perceive brands as more human and more interactive. Communicating in a conversational manner is, according to Searls and Weinberger (2000), one of the most important aspects of online communication. In general, brands on Facebook and Twitter communicate in a more interactive manner than in traditional brand communication. For example, the average response rate to questions posed on the Facebook pages of worldwide brands is 66.5% (Socialbakers, 2014), with several brands answering almost all questions received, often within an hour (see also PRNewsWire, 2014).

The tone of voice of brand-consumer conversations in social media is often informal and the high level of interactivity makes consumers perceive what Kelleher (2009) labeled as a conversational human voice: 'an engaging and natural style of organizational

communication as perceived by an organization's publics based on interactions between individuals in the organization and individuals in the public.' (Kelleher, 2009, p. 177). In Kelleher's study, frequent visitors of a corporate blog perceived the conversational human voice of the organization behind the weblog as higher, which in turn was related to trust, satisfaction and commitment (Kelleher, 2009; Kelleher & Miller, 2006).

Several subsequent studies have shown that high levels of interactivity are positively related to perceived conversational human voice, which in turn predicts more positive brand evaluations. Customer care in social media enhances consumers' brand evaluations (van Noort & Willemsen, 2011; van Noort, Willemsen, Kerkhof, & Verhoeven, 2014), partly through perceptions of conversational human voice. In crisis communication, personal narratives and first-person voice enhanced perceptions of interactivity and social presence, which in turn were related to reputation (Park & Cameron, 2014). Therefore, we hypothesize:

H4: Perceived Conversational Human Voice positively predicts improvements in brand evaluations.

Method

Target brand and participants

The target brand Old Holland Classic Colors (a Dutch company selling artist's paint) maintained a very active Facebook page in English language (± 10.000 followers at the time of the study, April 15 – June 4, 2013). Posts on the page (app. two per week) consisted for instance of painting tips, (famous) paintings with a fun fact or question, inspirational quotes, historical information about paint colors or famous painters. These posts had an informal tone, but were not personally signed. In addition, approximately every 10 days new pictures posted by followers were added to a 'Paintings by our followers' album.

Both the Facebook and Twitter account of the target brand Old Holland were used to recruit current followers of the Facebook page. Several other social media channels,

including Facebook pages about art and painting, were used to recruit participants who were not familiar with Old Holland, yet were likely comparable to the Old Holland followers in both social media use and art appreciation. The two wave survey was in English language. Participants were informed that they could win a Samsung tablet in a raffle held among participants completing both surveys.

In total, 297 participants completed the pre-measure survey. Three participants did not own a Facebook account and were excluded. Of the remaining 294 participants 97 (33.0%) dropped out before completing the post-measure. This left a sample of $N = 197$ (67%) completing both the first and second survey. Of these participants 56.9% ($n = 112$) was female, 43.1% ($n = 85$) was male; Age $M = 33.74$ years old ($SD = 12.77$, range 16-69, 1 missing). The majority resided in the Netherlands (61.4%), the rest in the USA (19.8%), or other countries worldwide (18.8%). Most were employed (39.6%), or were student (35.0%), the rest was either unemployed, retired or otherwise occupied (25.4%).

Design

Participants were assigned to the conditions of a 3 (Brand follower: Current follower, New follower, Non follower) x 2 (Time: pre-measure, post-measure) mixed design; the first factor varied between participants, the second within. Participants indicating in the pre-measure to be familiar with the target brand's Facebook page and to currently 'like' it were assigned to the Current-follower group. Participants not familiar with the Facebook page were randomly assigned to either the Non-follower, or New-follower group. The New-followers were instructed to 'like' the brand's Facebook page and thus follow its posts. The post-measure was administered after a one month interval. At both the pre- and post-measure all participants rated the target brand on the dependent measures brand attitude, brand equity, Net Promoter Score and purchase intention.

Procedure

Premeasure. A link in the recruitment messages directed participants to the online questionnaire. Participants read that the study was about the Facebook activities of a certain, at this point unspecified, brand, and that it consisted of two questionnaires separated by a one month interval.

Only participants indicating they owned a Facebook account continued to the first block of questions asking about demographics and their use of social media. The next block asked about the participants' affiliation with and activity regarding art, painting and artists' colors. The third block consisted of questions about the knowledge of the participants about Old Holland and their Facebook page. All participants first indicated if they were familiar with the company Old Holland and with the Facebook page of the brand (yes /no). Participants who stated that they were familiar with the Facebook page of Old Holland and to currently 'like' it (i.e., Did you subscribe to the page by pushing the like button? yes/no) were assigned to the condition 'Current follower'. Participants who answered 'no' were randomly assigned to either the 'New follower' or the 'Non follower' condition.

All participants then continued to the next block, which instructed them to carefully look at the information and picture of Old Holland that were about to be shown. The next page showed a picture and a descriptive text about the company Old Holland and their products. Participants then answered questions measuring their brand attitude, brand equity, net promoter score and purchase intention about Old Holland.

Next, only participants who were assigned to the condition 'New follower' continued to an additional block, in which they were asked to like the Facebook page of Old Holland. They were enabled to immediately do so by clicking a like button. Participants were then asked if they had liked the page and if not, why they decided not to.

In a final block all participants were again informed that the study consisted of two separate surveys and about the Samsung Tablet raffle, and were asked to leave their e-mail address allowing us to contact them for the second survey.

Post measure. Exactly one month after completing the pre-measure, participants received an e-mail, asking them to participate in the second part of the study. Both in the e-mail and in the introduction screen of the survey, participants were briefly reminded of the study and the possibility to win a tablet. They then continued to the first two blocks, in which they were asked for their date of birth, the country they resided in, their primary language and their activity on internet and social media regarding art, painting and artists' colors.

In the third block, participants were asked if they were familiar with the company and Facebook page of Old Holland and if so, whether they currently liked the page. Those who did were asked about their activity regarding the Facebook page of Old Holland in the past month. Participants were asked if they had followed the brand during the past month, how much content they had seen of the brand and how much they had liked the content they had received.

In the fourth block, using the same instruction and items we again measured brand attitude, brand equity, net promoter score and purchase intention for Old Holland. Only participants in the “current follower” and “new follower” condition were then asked to complete a measure of conversational human voice. Finally, they were thanked for participating and informed that they would be contacted once more about the outcome of the raffle.

Dependent measures

The following dependent measures, except the last one, were administered at both the pre-measure and the post-measure.

Brand attitude. Participants were asked to rate Old Holland on four 9-point scales bad-good, not nice-nice, attractive-unattractive and qualitatively bad-qualitatively good. Items were compiled into mean indexes (pre-measure Cronbachs $\alpha = .93$, $M = 7.59$, $SD = 1.36$; post-measure $\alpha = .94$, $M = 7.62$, $SD = 1.30$).

Brand equity. Based on Aaker (1996), participants rated their agreement with eight statements about Old Holland on 5-point Likert scales for (1 = strongly disagree, 5 = strongly agree). Example items are ‘This brand has personality’ and ‘This brand is different from competing brands’. Items were compiled into mean indexes (pre-measure Cronbachs $\alpha = .85$, $M = 3.63$, $SD = 0.58$; post-measure $\alpha = .87$, $M = 3.75$, $SD = 0.62$).

Net Promoter Score. Following Reichheld (2003), participants answered the question ‘How likely are you to refer Old Holland to a friend or colleague?’ on a scale ranging from 1 (= very unlikely) to 10 (= very likely; pre-measure, $M = 6.53$, $SD = 2.83$; post-measure $M = 6.87$, $SD = 2.68$).

Purchase intention. Participants were asked to answer the question ‘If you were to buy artistic paint, how likely would you be to buy Old Holland paint?’ on a scale from 1 (= very unlikely) to 10 (= very unlikely; pre-measure, $M = 7.04$, $SD = 2.38$; post-measure $M = 7.17$, $SD = 2.46$).

Conversational human voice. Conversational human Voice was measured only at the post-measure by means of eleven items (Kelleher, 2009). Participants rated their agreement on statements about Old Holland on 7-point scale ranging from 1 (= strongly disagree) to 7 = (strongly agree). Example items are ‘Old Holland is open to dialogue’, ‘Old Holland uses conversation-style communication’. Items were compiled into a mean index (Cronbachs $\alpha = .92$, $N = 112$, $M = 4.63$, $SD = 0.88$).

Control variables.

The following control variables on general social media use and art/paint appreciation and activity were measured only at the pre-measure.

General Facebook time. Participants answered one item ‘How often do you spend time on Facebook?’ on a 12-point scale (1 = never, 2 = once a year, 3 = a few times a year, 4 = once every two months, 5 = once a month, 6 = once a week, 7 = a few times a week, 8 = once a day, 9 = a few times a day, 10 = once every two hours, 11 = once every hour, 12 = a few times per hour; Overall $M = 9.38$, $SD = 1.36$). For inclusion as ANOVA covariate and predictor in regression this ordinal variable was collapsed into three groups (light users, score 1-7; medium users, score 8-9; heavy users, score 10-12), from which we created two dummy variables with the low group as baseline.

General Facebook intensity. Participants rated their agreement on six items (Ellison, Steinfield & Lampe, 2007) about their Facebook use (1 = strongly disagree, 5 = strongly agree) such as ‘Facebook is part of my everyday activity’ and ‘I am proud to tell people I'm on Facebook’. Items were compiled into a mean index (Cronbachs $\alpha = .78$, $M = 3.36$, $SD = 0.68$).

General Art/paint appreciation. Art/paint appreciation was measured only at the pre-measure by two items, asking ‘How much do you appreciate art / artistic painting on a scale from 1 (= not at all) to 10 (=very much)?’. Items were compiled into a mean index (Cronbachs $\alpha = .95$, $M = 7.88$, $SD = 2.18$).

General Artistic activity. General Artistic activity was measured at the pre-measure by four items, asking participants ‘How often do you ... use artists’ colors? / buy artists’ colors?, browse the Internet with the purpose of looking at art / artists’ colors? / use social media with the purpose of looking at art / artists’ colors?’ on a 8-point scale (1 = never, 2 = once a year, 3 = a few times a year, 4 = once every two months, 5 = once a month, 6 = once a week, 7 = a

few times a week, 8 = every day). Items were compiled into a mean index (Cronbachs $\alpha = .89$, $M = 3.32$, $SD = 2.13$).

The following control variables measured exposure to and appreciation of the Facebook posts of Old Holland in the past month between pre- and post-measure. They were administered only at the post-measure and only for participants in the current and new follower conditions. Note that we had missing values for 8 cases.

Facebook exposure T₂. Two items measured exposure to the target brand's Facebook posts: 'How often, during the past month, did you visit the Facebook page of Old Holland? / did you see Facebook posts by Old Holland?' answered on a 7-point scale (1 = never, 2 = 1-3 times, 3 = 4-6 times, 4 = 7-9 times, 5 = 10-12 times, 6 = 12-15 times, 7 = More than 15 times). Answers were summed ($N = 104$, $M = 5.36$, $SD = 2.05$).

Facebook attitude T₂. Attitude towards the target brand's Facebook page was measured with seven items, such as 'I would like to continue following the page of Old Holland' and 'I am satisfied with the content provided by the Facebook page of Old Holland', answered on 5-point scales (1 = strongly disagree, 5 = strongly agree). Two general items 'How much did you like the Facebook page / Facebook posts of Old Holland?' were measured on a scale ranging from 1 (= not at all) to 10 (= very much). After standardizing items, they were compiled into a mean index (Cronbachs $\alpha = .90$, $N = 104$, $M = .03$, $SD = .79$).¹

Results

Manipulation check

We first checked whether our assignment and manipulation of brand follower group was successful. First, a number of participants assigned to the New follower condition ($n =$

¹ A number of additional more distant control variables (e.g., activity on other social media platforms, N Facebook friends and likes, browsing internet for art) are not reported due to space constraints.

19 out 74, 26% within condition) declined to like the Facebook page of Old Holland on our request in the pre measure. Commonly mentioned reasons were that they only wanted to like pages of brands they knew and that they had no interest in the target brand and the content they post. Since these participants were not exposed to the content of the Facebook page, they were excluded from the analyses reported hereafter. Yet, because these like-refusers are an informative group in itself, we will compare them to the experimental groups.

Second, the checks administered at the post measure revealed that of the remaining 55 participants in the New follower condition, 7 participants did not continue to like the page for the whole past experimental month (5 unfollowed after one day, 1 after two weeks, 1 after three weeks). Of the Current followers (initially $n = 72$), 8 participants indicated at the post measure they did not like the brand page anymore. Of the Non followers (initially $n = 51$), 2 participants indicated they currently liked the brand page, while they did not at the pre measure. Apparently, participation in the premeasure survey made them decide to like the brand page. As the treatment assigned in the pre measure was not continued during the whole experimental month for these 17 participants, they were excluded from the analyses reported hereafter.²

Control analyses

Next, we checked whether brand follower groups differed on the control variables. Table 1 shows the results of ONEWAY analyses comparing brand follower groups on the general control variables. The groups do not differ significantly on time spent on Facebook and Facebook intensity according to Tukey post hoc comparisons, although the general main effect of time spent on Facebook is marginally significant ($F(2,158) = 3.02, p = .052$; FB intensity $F < 1$). On general art/paint appreciation and artistic activity, however, the current

² Excluding these participants does not notably change the results: Out of the 76 tests reported here, four (noncentral effects) are significant rather than marginally significant when these 17 cases are included; the rest is the same in terms of significance.

followers score significantly higher than both the New- and Non followers (resp. $F(2,158) = 60.21, p < .001$; $F(2,158) = 68.60, p < .001$). The participants in this group are also significantly older ($F(2,157) = 21.51, p < .001$). The New- followers also score higher on art/paint appreciation and artistic activity than the Non follower group, which likely results from the exclusion of the like-refusers from the new-follower group ($n = 19$), as these like-refusers score low on these variables (resp. $M_{art\ apprec} = 6.87, SD = 2.18$; $M_{art\ activ} = 2.25, SD = 1.59$). The like-refusers also have more negative scores on the dependent variables (pre measure $M_{brand\ attitude} = 6.20, SD = 1.31$; $M_{brand\ equity} = 3.01, SD = 0.48$; $M_{NPS} = 4.26, SD = 2.28$; $M_{purchase\ intention} = 5.05, SD = 2.35$) as compared to the experimental groups (See Table 3). This suggests that some self-selection occurred in the new follower group; those who did follow our request to like the page can be characterized as having at least some fertile ground to start liking the brand, those who refused did so because of a negative first judgment. This appears to resemble what happens after real-life “like-us on Facebook” actions. Given that participants are asked to like using their personal Facebook account they most likely made this judgment as they would do in real life, which also becomes clear when looking at the reasons provided (see above).

(insert Table 1 here)

Correlation analyses on the control and dependent variables as measured in the pre-measure (see Table 2), showed that age was significantly related to all four dependent variables. General Facebook intensity and time were unrelated to the dependent variables, except that Facebook time showed a significant negative correlation with NPS. General art/paint appreciation and artistic activity correlated strongly with all dependent variables regarding the evaluation of target brand. We will take this into account when testing hypotheses.

(insert Table 2 here)

Hypotheses testing

In order to test our hypotheses we conducted separate 3 (Brand follower group: Current follower, New follower, Non follower) X 2 (Time: pre-measure, post-measure) mixed ANOVAs with repeated measures on the four dependent brand evaluation variables: i.e., brand attitude, brand equity, Net Promoter score (NPS), and purchase intention. Table 3 shows the descriptives.

Our first Hypotheses stated that current followers should be more positive about the brand than new- and non followers (H1), and that current and new followers should increase their brand evaluation between the pre- and post-measure, whereas non followers should not show a change (H2). Confirming H1, we observed main effects of brand follower group showing that Current followers of the brand scored significantly higher on all four dependent variables compared to both New- and Non followers at both pre- and post-measure (resp. $F(2,158) = 35.31, p < .001, \eta_p^2 = .31$, $F(2,158) = 46.49, p < .001, \eta_p^2 = .37$; $F(2,158) = 68.88, p < .001, \eta_p^2 = .47$; $F(2,158) = 35.94, p < .001, \eta_p^2 = .31$).

Second, we observed (marginally) significant Group X Time interactions for brand attitude ($F(2,158) = 3.66, p = .03, \eta_p^2 = .04$), NPS ($F(2,158) = 2.88, p = .06, \eta_p^2 = .04$) and purchase intention ($F(2,158) = 3.39, p = .04, \eta_p^2 = .04$), but not for brand equity ($F(2,158) = 1.18, p = .17, \eta_p^2 = .02$). Pairwise comparisons with Bonferroni corrections of pre- and post-measure scores within brand follower groups showed that, in line with H2, New followers showed a significant positive increase on all four dependent measures (see Table 3). As expected the Non-followers showed no significant changes in brand evaluation between pre- and post-measure, with the exception of NPS where we unexpectedly observed

a positive increase. Note, however, that this measure may not be the most reliable particularly when posed to non followers.^{3 4}

Against H2, however, the Current followers, who already followed Old Holland prior to the study, did not significantly increase in brand evaluations.

(insert Table 3 here)

In order to test whether the control variables could account for the observed effects we ran the same ANOVAs with the five control variables as reported in Table 1 as covariates. The pre-post differences in the New follower group as reported in Table 3 remained significant for all four dependent variables (all $ps < .04$), while all other comparisons remained nonsignificant. The only exception is that the unexpected effect of NPS in the non follower group became nonsignificant ($p = .06$, 95% $CI_{diff} [-0.03, 1.23]$). This shows that individual differences in age, Facebook usage and art appreciation and activity do not explain the observed positive increase in brand evaluations for New followers.

Explanatory processes

In order to test H3 and H4 concerning the explanatory factors that could account for the changes in brand evaluations for the current and new followers, we conducted separate linear regression analyses on the four dependent variables (i.e., post-measure, and excluding Non followers; $N = 112$). The explanatory factors include exposure to and attitude towards the Facebook page and perceived conversational human voice. Note that the Non-follower group cannot be included in these analyses since these variables could not be assessed among

³ Net Promotor Score is conventionally used as a group level measure (ideally a representative group of customers) indicating the % of people who would definitely recommend a brand (score > 8), and not as an individual measure.

⁴ Comparing the difference scores ($t_2 - t_1$) of the four DVs showed that the positive increases in the New follower group for both brand attitude and purchase intention (see Table 3) were significantly larger than the changes in the Non follower group (resp. $t(95) = 2.25, p = .026$; $t(95) = 1.99, p = .050$). The difference scores for brand equity in the New follower group showed a marginally significant difference with the change in the Non-follower group ($t(95) = 1.78, p = .078$). For NPS the difference scores do not differ ($t < 1$, ns), because of the unexpected change in the Non-follower group.

this group. The dependent variables were regressed in subsequent blocks on the respective dependent variable's pre-measure score, brand follower group (dummy coded; model 1), Facebook Attitude T₂, Facebook exposure T₂ (model 2) and Conversational Human Voice (CHV; model 3). Table 4 shows the results.

Hypothesis 3 predicted that the amount of exposure and attitude towards the target brand's Facebook posts would positively predict brand evaluations. Against H3, however, the regression analyses showed no effects of these predictors (model 2) on the dependent variables, with the exception that Facebook attitude T₂ was marginally predictive of Brand attitude, and significantly predictive of NPS.

These latter effects, however, became nonsignificant in the final model (model 3), including Conversational Human Voice (CHV). That is, in line with Hypothesis 4 we observed that CHV was positively predictive of all four dependent variables. This shows that the observation of a Conversational Human Voice in the Facebook activities of the target brand is the main predictor of changes in brand evaluations, irrespective of the amount of exposure, or attitude towards the posts, and controlled for group (current or new followers)⁵. Table 4 shows the results of the individual predictors in the each model. Adding the control variables (see Table 1) into the same regression analyses did not change the pattern of results. The respective dependent variables pre-measure score and CHV remained strong, and the only⁶, significant predictors.

(insert Table 4 here)

Discussion

⁵ Current followers reported a higher perceived Conversational human voice ($M = 4.80$, $SD = 0.81$) compared to new- followers ($M = 4.40$, $SD = 0.92$), $t(110) = 2.46$, $p = .02$.

⁶ The only exceptions are additional significant effects of Gen. Facebook intensity ($p = .02$), Gen. artistic activity ($p = .001$) and Gen. art appreciation ($p = .003$) in the regression analysis predicting NPS. In all analyses the respective pre-measures ($ps = .000$) and CHV ($ps < .02$) remained significant.

The present field study aimed to investigate whether liking a brand's Facebook page causes changes in brand attitude, brand equity, purchase intention, and Net Promoter Score. Our pre- post measure experimental design allowed us to compare a control group (non Facebook followers) with a group of consumers who already followed the brand's Facebook page prior to the study (current followers), with a randomly selected group of consumers who were instructed to 'like' the brand's Facebook page for one month and thus follow its posts (new followers).

In line with hypothesis 1 we observed that current followers evaluated the brand more positively (i.e., on brand attitude, - equity, NPS and purchase intention) than both new and non followers. This may either be due to that these consumers already had positive experiences with the brand which caused them to like the brand on Facebook (i.e., a selection effect), or that they have developed a more positive evaluation after a prolonged period of Facebook following (i.e., a causal effect). These findings are in line with earlier correlational studies that show that consumers who follow a brand page on Facebook are more positive about the brand and spend more money on buying the brands' products (e.g., Dijkmans et al., 2015; Kim, & Ko, 2012; Mulvihill, 2011; Renfrow, 2014). The limitation of such findings is that one cannot separate which of these two effects caused the positive relation.

Most interesting, and in line with hypothesis 2, we observed that new followers showed a significant positive increase over the one month period on all brand evaluation measures, whereas the non-followers showed no change (except for an unexpected, but unreliable change in NPS)³. Given that the only difference between these groups is our experimental manipulation, this provides compelling evidence for a causal effect of liking the target brand on Facebook on brand evaluations. Note that a small group of participants in the new-follower group ($n = 19$) refused to like the page on our request. This subgroup reported less positive brand evaluations and lower interest in art than the participants who were willing

to like the page. This demonstrates a (negative) selection effect, showing that a – at least somewhat – positive first impression is required for people to like a brand page.

The Current followers, however, who already followed Old Holland prior to the study, did not significantly increase their brand evaluations in the one month experimental period. This latter finding, which goes against H2, is likely caused by the fact that the brand ratings for this group were already very high at the pre-measure either as a result of their prolonged period of Facebook following and/or brand experiences prior to this study.

As for potential explanatory variables, we hypothesized (H3) that the amount of exposure to Facebook posts, and the consumer's attitude towards the received posts, should explain changes in brand evaluations. Against this expectation, however, we observed no unique effects of these variables. Instead, and confirming H4, we observed strong significant effects of Conversational Human Voice (Kelleher, 2009) in predicting improvements in brand evaluations. This suggests that the perception of a Conversational Human Voice in the Facebook activities of the target brand is the main explanatory factor in the observed improvements in brand evaluations, irrespective of the amount of exposure, or attitude towards the posts, and controlled for group (current or new followers) and initial levels of brand evaluations (premeasure scores, T_1).

Although we did not find convincing effects of exposure and Facebook attitude, it seems reasonable to assume that a minimum amount of exposure to- and appreciation of the posts is required. It should be noted that respondents in our study on average indicated to have been exposed to the brand's Facebook posts 10-12 times during this month, and in general positively appreciated the content. Our notion, after all, is that being exposed to Facebook posts of the target brand causes the observed positive increase in brand evaluations. Based on these analyses it can be argued that, given a minimum exposure to positively

appreciated Facebook posts, being exposed to more of the same content does not make a difference.

More than exposure, the perception of an engaging and natural style of communication in the posts (Kelleher, 2009) was associated with changes in brand evaluations. Several other studies have shown that the interactivity that brings about the perception of a conversational human voice is an important driver of positive effects of exposure to brands in social media (e.g., van Noort & Willemsen, 2011; Park & Lee, 2013; Sweetser & Metzgar, 2007; Yang, Kang, & Johnson, 2010). Some authors (Colliander & Dahlen, 2011; Labrecque, 2014) have found similar effects but refer to theories on parasocial interaction to explain the effects. The concept of parasocial interaction has previously been developed to explain the relationship people experience with TV characters, which in some ways resembles the relationships people experience with real people (Horton & Wohl, 1956). In the context of brands in social media, both perceiving a conversational human voice and experiencing parasocial interaction refer to experiencing a brand as having human like qualities. This implies that brands that are not able (or willing) to present themselves in a human-like way in social media, are probably less successful in gaining and keeping the attention of consumers, and in obtaining positive brand evaluations.

Our findings were obtained in an online experiment with real consumers following a real Facebook brand page using their own Facebook account and during their daily routine, which greatly enhances external validity. Yet, a few limitations should be noted. First, as in most experimental studies, participants were aware that they were participating in a study. It might be that this made them pay more attention to the brand's posts in the testing period than they normally would. Such a potentially increased attention we think does not necessarily change the direction of brand evaluations, but we cannot exclude the possibility that it strengthened the observed effects. Although it may bring practical difficulties and

perhaps increase dropouts, future studies might be able to recruit participants without informing them beforehand about the second survey – and thus prevent a potential testing effect.

Second, we selected a brand, Old Holland, that has a highly interactive presence on Facebook: followers are invited to submit their own created paintings to the Facebook page, thus enabling others to like their paintings, discuss the colors, etc.. The brand itself participates in the discussions and responds to questions. Most brands are not that interactive in social media (e.g., Carim & Warwick, 2013; Lovejoy, Waters, & Saxton, 2012). Positive effects of following a brand page are likely not the result of merely being exposed to (any) brand content; the way in which the brand presents itself on Facebook is important. The effects of conversational human voice strongly suggests that the interactivity of the brand's presence plays an important role in bringing about the positive effects on brand evaluations. To enhance our understanding of the most effective social media activities for organizations, future studies might include other brands that vary in the way they present themselves on Facebook and focus on the effects of these specific behaviors (e.g., interactivity).

In our study, some (self) selection effects occurred among the new-followers; some participants refused to like the brand page on our request as a result of more negative initial brand evaluations. Consequently, the participants in the new follower group who did like the page had an at least somewhat positive initial evaluation. As participants used their own Facebook account this most likely resembles what happens in reality; people tend to like the pages of brands they appreciate. It is interesting that actions aimed at persuading people to like a brand on Facebook may vary in their compulsory nature. A simple banner invitation for instance leaves consumers much more choice than forcing people to like a page before they obtain desired benefits like price reductions or wifi access. It remains a question whether such forceful “like-us on Facebook” actions would be equally effective, as they might enforce

consumers with a negative initial evaluation to like a page against their will. Perhaps at least some fertile ground is needed for positive causal effects from Facebook following to occur.

In the current study a period of one month was used to establish the effect of liking a Facebook brand page. It seems plausible that effects of exposure to a brand's content are strongest in the first stage where content and conversations are still new and surprising. At a later stage the effects may wear off, which may help explain why the current followers did not report more positive brand evaluations after the one month period. Longitudinal studies over a more prolonged time period are needed to gain insights into the gradual improvements and perhaps even decline in brand evaluations over time.

Another reason why we observed no effects for current followers in the present study may be that current followers had very positive brand evaluations to begin with. The latter is exactly why previous correlational studies are limited – When studying consumers who have chosen to follow a brand themselves, the reported brand evaluations may very well be the cause rather than the effect of following the brand, preventing for any causal conclusions. Our findings are therefore valuable because they provide first evidence that following a brand's Facebook updates has the potential to actually *cause* a positive change in important brand measures, and suggest that brand investments in social media activities do pay off.

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Tables

Table 1. Means (and standard deviations) of the general control variables measured in the pre-measure, by brand follower group.

	Brand follower group		
	Current followers	New followers	Non followers
	(<i>n</i> = 64)	(<i>n</i> = 48)	(<i>n</i> = 49)
Age	41.19 (11.48) _{a1}	29.38 (11.22) _b	29.20 (10.86) _b
Gen. Facebook time	9.05 (1.62) _a	9.54 (1.18) _a	9.63 (1.20) _a
Gen. Facebook Intensity	3.42 (0.79) _a	3.32 (0.59) _a	3.38 (0.67) _a
Gen. Art/paint appreciation	9.67 (0.74) _a	7.41 (1.79) _b	6.39 (2.23) _c
Gen. Artistic activity	5.21 (1.53) _a	2.68 (1.96) _b	1.90 (1.21) _c

Note. Means with a different subscript (a,b) differ significantly according to Tukey posthoc tests ($p < .05$). ¹ = one missing value.

Table 2. Correlations between control variables (1-5) and dependent variables (6-9), as measured in the pre-measure.

<i>Measure</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>
1 Age ¹	1	-.22**	.19	.48**	.50**	.35**	.25**	.37**	.30**
2 Gen. Facebook time ²		1	.40**	-.19*	-.17*	-.10	-.11	-.16*	-.13
3 Gen. Facebook intensity			1	.03	.08	.07	.09	.07	.09
4 Gen. Art/Paint appreciation				1	.76**	.53**	.46**	.58**	.47**
5 Gen. Artistic activity					1	.51**	.48**	.58**	.48**
6 Brand attitude						1	.63**	.53**	.56**
7 Brand equity							1	.60**	.65**
8 NPS								1	.74**
9 Purchase intention									1

Note. $N = 161$. ¹= one missing value; ² because this measure is ordinal correlations with this measure are Spearman's rho, other correlations are Pearson; * $p < .05$; ** $p < .01$ (2-tailed).

Table 3. Means (and SDs) of the dependent variables for the brand follower groups in the pre-measure, post-measure and the Mean difference between these two measures.

Depend. variables	Brand follower group								
	Current followers (<i>n</i> = 64)			New followers (<i>n</i> = 48)			Non followers (<i>n</i> = 49)		
	Pre	Post	Diff.; CI	Pre	Post	Diff.; CI	Pre	Post	Diff.; CI
Brand	8.59	8.50	-0.09	7.18	7.51	0.32*	7.23	7.06	-0.18
attitude	(0.78)	(0.93)	[-.33,.15]	(1.22)	(1.14)	[.04,.60]	(1.25)	(1.24)	[-.46,.10]
Brand	4.12	4.20	0.09†	3.42	3.64	0.22**	3.45	3.52	0.07
equity	(0.51)	(0.57)	[-.01,.19]	(0.37)	(0.43)	[.10,.33]	(0.40)	(0.45)	[-.04,.19]
NPS	9.02	8.97	-0.05	5.90	6.65	0.75**	4.78	5.39	0.61*
	(1.45)	(1.75)	[-.52,.42]	(2.33)	(2.12)	[.21,1.29]	(2.47)	(2.32)	[.08,1.15]
Purchase	8.80	8.80	0.00	6.35	7.08	0.73**	6.02	5.96	-0.06
intention	(1.66)	(1.76)	[-42,.42]	(2.29)	(2.11)	[.25,1.21]	(2.15)	(2.28)	[-.54,.42]

Note. ** $p < .01$, * $p < .03$, † $.05 < p < .1$, CI = 95% Confidence interval for difference, based

on pairwise pre-post comparisons with Bonferroni corrections. P-values < .05 in bold.

Table 4. Results of separate linear regression analyses in columns of explanatory variables predicting the four dependent variables (post-measure T₂) controlling for pre-measure scores (T₁); including only Current and New brand follower groups.

Predictors by model	Dependent variable (DV)											
	Brand attitude T ₂			Brand equity T ₂			NPS T ₂			Buying intent. T ₂		
1	$R^2 = .43$, $F=40.36, p<.001$			$R^2 = .56$, $F=69.66, p<.001$			$R^2 = .52$, $F=58.85, p<.001$			$R^2 = .55$, $F=67.37, p<.001$		
	β	t	p	β	t	p	β	t	p	β	t	p
DV's pre-measure T ₁	.59	6.68	.000	.72	9.01	.000	.65	7.54	.000	.73	9.71	.000
	[.39, .72]			[.57, .90]			[.44, .75]			[.53, .80]		
Brand follow group	-.09	1.04	.30	-.05	< 1	.54	-.10	1.19	.31	-.02	< 1	.79
	[-.61, .19]			[-.24, .13]			[-1.23, .31]			[-.71, .54]		
2	$R^2 = .46$, $F=22.38, p<.001$			$R^2 = .58$, $F=38.08, p<.001$			$R^2 = .55$, $F=32.71, p<.001$			$R^2 = .56$, $F=34.26, p<.001$		
	β	t	p	β	t	p	β	t	p	β	t	p
DV's pre-measure T ₁	.53	5.64	.000	.69	8.29	.000	.59	6.78	.000	.70	8.92	.000
	[.32, .68]			[.54, .88]			[.39, .70]			[.50, .78]		
Brand follow group	-.61	< 1	.49	-.02	< 1	.84	-.07	< 1	.40	-.00	< 1	.99
	[-.54, .26]			[-.20, .17]			[-1.08, .44]			[-.64, .63]		
Facebook attitude T ₂	.17	1.94	.06	.09	1.23	.22	.18	2.38	.02	.09	1.16	.25
	[-.01, .52]			[-.04, .19]			[.09, .99]			[-.17, .66]		
Facebook Exposure T ₂	.04	< 1	.58	.11	1.62	.11	.03	.35	.73	.03	< 1	.67
	[-.06, .12]			[-.01, .07]			[-.13, .19]			[-.11, .18]		
3	$R^2 = .48$, $F=19.86, p<.001$			$R^2 = .64$, $F=37.89, p<.001$			$R^2 = .59$, $F=30.25, p<.001$			$R^2 = .60$, $F=32.33, p<.001$		
	β	t	p	β	t	p	β	t	p	β	t	p
DV's pre-measure T ₁	.52	5.61	.000	.65	8.15	.000	.57	6.78	.000	.67	8.89	.000
	[.32, .66]			[.50, .82]			[.37, .68]			[.48, .75]		
Brand follow group	-.05	< 1	.53	-.02	< 1	.76	-.07	< 1	.40	.00	< 1	.98
	[-.52, .27]			[-.20, .15]			[-1.04, .42]			[-.60, .62]		
Facebook attitude T ₂	.10	1.13	.26	.01	< 1	.92	.10	1.32	.19	.01	< 1	.94
	[-.12, .42]			[-.11, .12]			[-.15, .76]			[-.40, .44]		
Facebook Exposure T ₂	-.02	< 1	.81	.02	< 1	.80	-.05	< 1	.50	-.05	< 1	.50
	[-.10, .08]			[-.04, .05]			[-.21, .11]			[-.20, .10]		
Conversat. Human V.	.21	2.41	.018	.29	3.99	.000	.24	3.12	.002	.25	3.37	.001
	[.05, .48]			[.10, .28]			[.22, .98]			[.25, .95]		

Note. $N = 112$; Predictors entered in 3 models, dfs by model = 2/4/5, 111. Brand follower group dummy coded (0 = current, 1 = new). [...] = 95% Confidence interval for B. Missing values for Facebook attitude and exposure replaced with mean. P-values < .05 in **bold**.